BD136 BD138/BD140

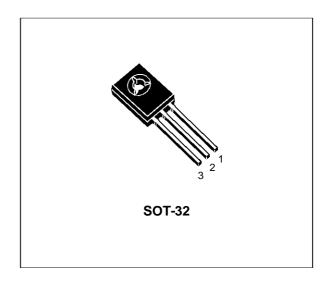
PNP SILICON TRANSISTORS

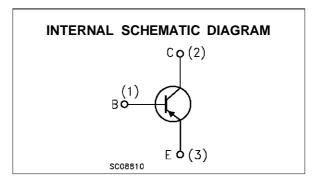
- SGS-THOMSON PREFERRED SALESTYPES
- PNP TRANSISTOR

DESCRIPTION

The BD136, BD138 and BD140 are silicon epitaxial planar PNP transistors in Jedec SOT-32 plastic package, designed for audio amplifiers and drivers utilizing complementary or quasi compementary circuits.

The complementary NPN types are the BD135 BD137 and BD139.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value		
		BD136	BD138	BD140]
V_{CBO}	Collector-Base Voltage (I _E = 0)	-45	-60	-80	V
V_{CEO}	Collector-Emitter Voltage (I _B = 0)	-45	-60 -80		V
V_{EBO}	Emitter-Base Voltage (I _C = 0)		-5		
Ic	Collector Current		-1.5		
I _{CM}	Collector Peak Current		-3		
Ι _Β	Base Current		-0.5		Α
P_{tot}	Total Dissipation at T _c ≤ 25 °C		12.5		W
P_{tot}	Total Dissipation at T _{amb} ≤ 25 °C		1.25		W
T _{stg}	Storage Temperature		-65 to 150		°C
Tj	Max. Operating Junction Temperature	150		°C	

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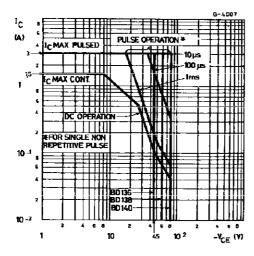
THERMAL DATA

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	$V_{CB} = -30 \text{ V}$ $V_{CB} = -30 \text{ V}$ $T_{C} = 125 ^{\circ}\text{C}$			-0.1 -10	μA μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -5 V			-10	μΑ
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage	I _C = -30 mA for BD136 for BD138 for BD140	-45 -60 -80			> > >
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = -0.5 A I _B = -0.05 A			-0.5	V
V _{BE} *	Base-Emitter Voltage	I _C = -0.5 A V _{CE} = -2 V			-1	V
h _{FE} *	DC Current Gain	I _C = -5 mA	25 25 40		250	
h _{FE}	h _{FE} Groups	I _C = -150 mA	63		160	

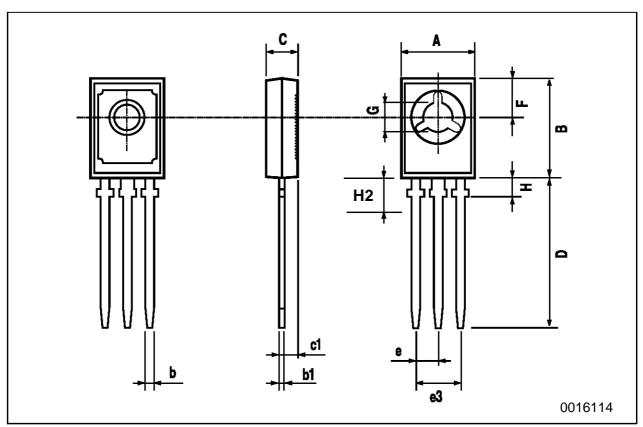
^{*} Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

Safe Operating Areas



SOT-32 (TO-126) MECHANICAL DATA

DIM.	mm			inch			
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
А	7.4		7.8	0.291		0.307	
В	10.5		10.8	0.413		0.445	
b	0.7		0.9	0.028		0.035	
b1	0.49		0.75	0.019		0.030	
С	2.4		2.7	0.040		0.106	
c1	1.0		1.3	0.039		0.050	
D	15.4		16.0	0.606		0.629	
е		2.2			0.087		
e3	4.15		4.65	0.163		0.183	
F		3.8			0.150		
G	3		3.2	0.118		0.126	
Н			2.54			0.100	
H2		2.15			0.084		



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